

ART. XIII.—*Remarks on Professor McCoy's Commentary.* By
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[Read before the Royal Society of Victoria, December 10th, 1860.]

I WAS not aware, till I perused Professor McCoy's "Commentary" on my letter, that I had offered any grounds of offence in it; and I deem it only right to express my sincere regret that, if so, I should have unknowingly made his Excellency the President the medium of anything so unbecoming my own intention. I had, however, stated that I did not "wish to speak disrespectfully of Professor McCoy's judgment and learning," and if he has not followed my example, it is my misfortune, and not my fault.

The preceding letter was too hastily penned to bear the construction of a deliberate memoir; and though I certainly sanctioned its being made use of, I did not suppose that it would have attracted the weight of Mr. McCoy's unkindest criticism.

In a little work*, recently published, I have given a concise account of the carboniferous formation of New South Wales, and also a brief statement of the controversy respecting it. I have, therein, given full credit to the fact alleged that the plant lately found in Victoria is a *Tæniopteris*. But I must observe that, except in His Excellency's letter, to which the above was a reply, I have never heard a syllable, either from Mr. McCoy nor any one else, about the plant. There could, therefore, be no denial of Mr. McCoy's assertions, for I have never seen anything that he has said or written on the subject, save the above "Commentary."

My remarks, therefore, were those of one who, having his own views upon a question, naturally required evidence before he submitted that question to a decision which opposed those views. Hence, I entered into a defence of my views, and gave a definition of the genus by way of *inquiry*, which was the only course open to me at this distance.

In the third paragraph of the "Commentary," Mr. McCoy attempts to show that my reference to *six* should have been *twenty-three* species. But if he will read my letter again, he

* Researches in the Southern Gold-fields of New South Wales, chapter xiv.

will find that I allude only in that number to *Tæniopteris*, and to no other genus; whereas he includes the other genera, to which I did not then allude.

His *third* remark, in the third paragraph, does not appear to me to settle the question in reference to Virginia; for the coal-field of Virginia is, as respects zoological fossils, exactly in the condition of the coal-field of New South Wales; and, therefore, so far they are certainly parallel; but neither can be proved to be oolitic, except by the plants; and Mr. Bunbury distinctly points out that the evidence of the Virginian plants is *ambiguous*, and he concludes that the Richmond coal-field might as well be referred to the triassic or to the jurassic series*.

In the fourth paragraph, Mr. McCoy assumes that I have used the word *formation* in the sense of *bed*. That I presume would be unnecessary to reply to. But when I wrote that passage, I wrote from memory. I have since found Mr. Oldham's letter (which I place for reference in the hands of His Excellency the President), and I find he mentions *five* distinct *groups*, all unconformable. He says, that in the lowest beds he finds *Glossopteris Browniana Vertebraria*, as in Australia; and he adds, "we have *Glossopteris* in the higher beds also, but not the same species." I understand Mr. Oldham to speak of the higher and the lower beds in reference to the whole mass of the coal-bearing rocks, which he has separated into five groups.

Now, Mr. McCoy says the *Glossopteris*, &c., accompany *Ammonites* in India, and therefore, are oolitic. But he did not mean, surely, to say this of Bengal. He must have alluded to cutch, where no doubt such plants as *Ptilophyllum*, *Lycopodites*, *Codites*, *Equisetites*, &c., occur with *upper* oolitic shells. I did not know, however, that there was any authority "twenty years ago" for affirming, as Mr. McCoy does, that the genera *Tæniopteris* and *Glossopteris* are, even in cutch, associated with the fossils named. Nor have we any reason to believe that it is the case now; for Mr. Oldham distinctly refers the cutch beds, not to the oolites, but to the wealden. If so, they cannot contain, as Mr. McCoy says, "the *lower* oolitic fossils of the clear sections of Europe."

Respecting Africa, I am quite aware that *Glossopteris* occurs in the *Dicynodon* beds; but I am also aware that Mr.

* Q. J. iii., 287—8.

Morris has determined a series of plants from the Dicynodon strata to be either *triassic* or *jurassic*.

So thoroughly indistinct is the settlement of the question in all quarters, as refers to the occurrence of those plants which Mr. McCoy asserts cannot be here otherwise than oolitic. What Mr. Morris says of the Dicynodon strata plants, Mr. Bunbury says of the Richmond plants; and, therefore, I consider that, even if my own ideas be altogether erroneous, the question is not necessarily settled, as the "Commentary" would have it.

I am next assailed on the ground of my allusion to Mr. Jukes, who, if not a "Palæontologist," is the author of an excellent manual, in which he follows Brown. Both, Mr. McCoy considers mistaken; the places I am very sarcastically referred to in Mr. Jukes' book were all marked down in my own copy, and I had ticked off, as references, the respective pages one against the other; I was, therefore, aware of all the Professor mentions; but, nevertheless, I considered myself justified in quoting Brown, Mr. Jukes' references to whom I have verified.

I am much obliged for Mr. McCoy's "better list of the distribution of clearly ascertained species of *Tæniopteris*;" and only regret that he had not given the information without calling in question any other person's sagacity.

"In the next paragraph," Mr. McCoy criticises what I say of Phillips' Geology of Yorkshire, and accuses me of misstating a fact, viz., that in his book there is no figure of *Tæniopteris*.

If Mr. McCoy had the figure of *T. vittata* in Phillips' book, then it is not in my (2nd 1835) edition; for the figure t. 8, f. 5, is therein named "*Scolopendrium solitarium*," and I have mentioned that, though Morris classes this as *T. vittata*, Göppert calls it an "*Aspidites*." Certainly, as my knowledge has not yet extended to the rejection of Göppert's determinations by "all more modern writers," Mr. McCoy might have saved himself the trouble of wrongly accusing me of a misquotation.

But Mr. McCoy himself has (I hope unwittingly) made an incorrect statement in his version of the fifth paragraph of my letter; for Mr. Dana did not visit the Australian localities since Mr. McCoy wrote his paper on my fossils, but eight or ten years before, in 1839; consequently his getting more fossils without altering Mr. McCoy's views, was simply an

impossibility. I was with Mr. Dana when he procured some of them, and therefore know the facts.

Again, there is another mistake in what Mr. McCoy calls the *most disagreeable part of his task*, and he quite mistakes in that all I contend for.

Mr. McCoy decried at first any *coal beds* but those of oolitic age. (See his own quotation in the Commentary.) I forwarded a fossil to England by the late Admiral King, which, he says, is a species of *Lepidodendron*, to prove that there was a coal formation *not oolitic*; there was no intention whatever of alluding to any individual beds, such as Mr. McCoy now imagines; for my view was all along, that the divisions (which are now defined in my book) were parts of one formation, and therefore I considered the fossil in question good evidence. Singular, however, to say, Professor Edward Forbes says that, in all probability it was *not* a *Lepidodendron* (Lectures on Gold, page 53). The specimen was not given to me "*by an unscientific friend,*" nor did it come "*from a geologically unknown locality in Queensland;*" it was brought down by the late Dr. Leichhardt, who was an admirable botanist, and an excellent geologist, and the locality was on the Manilla River, in New South Wales, where that fossil abounds. As to what Mr. McCoy says about *tardiness of admission* as to the locality whence the *Lepidodendron* sent to England came, he has an advantage over me. I have no recollection of any such tardiness beyond that which was necessary in answering a correspondence between New South Wales and England—in those days an affair of many months. If Mr. McCoy wrote to me, I doubt not that I replied to his letter. But I remember sending home a cast of another *Lepidodendron*, which Mr. Templer found at Pine Ridge, Wellington Valley, respecting which I never got any information, nor reply to my letter, nor do I know what became of either. To the best of my recollection, I never received from Mr. McCoy, whilst he was in England, more than two short letters in my life.

"*The vague baseless supposition,*" mentioned next, is, I am happy to say, that of Mr. Morris, and, in adopting that supposition, I am willing to suffer the reproof which I share in such good company.

As to the specimen of *Lepidodendron* from Gipps Land, in the Melbourne Museum, it was not "*pointed out to me.*" I visited the Museum for the first time alone, and saw it

there to my entire satisfaction, but wished it had not been in a corner.

Respecting the New South Wales plant which I showed Mr. McCoy, in his room at the Museum, from below the coal seams interpolating beds with mountain limestone fossils, I repudiate his history of what was said at the time, and am astonished at his making out something like an attempt to impose incorrect evidence upon him.

Nor do I understand what he means about the sections. I had no drawings of any sections with me, I could not, therefore, exhibit any. And, if the sections be taken to mean not a drawing, but an account, of beds in succession, I can only reply that I believe Mr. McCoy has had explained to him long before that there is nowhere in New South Wales an uninterrupted series from the top to the bottom of the carboniferous rocks in any one section, and therefore it was easy to answer any question put in the negative, without involving any contradiction to Professor McCoy, as I thought it would give him pleasure; and it is a sorry return for my civility, to find them used in this strange manner against me.

No doubt I was asked, nay "pressed," as to *whether I got it myself, and if it could not have fallen in, &c., &c.*, which I really thought quite unnecessary, and not a dignified way of treating me; but I gave the only answer I could give consistent with truth—that, though a stone could fall to the bottom of a shaft, this specimen could not, for the Newcastle seams do not exist there at all above the upper beds, which are those of Mr. McCoy's carboniferous rocks, and I relied on the authority of the gentleman who sent it. As to the upper beds at the shaft, I speak from my own knowledge of the locality, having been there, though Mr. McCoy asserts not. But I have not been down the shaft. Mr. McCoy will recollect a specimen I asked him to name, sent from Sydney. That came from the top beds of the shaft section. As the story stands in the "Commentary," it helps to make up an item against *me*; but it does not affect the truth, that, though I did not find the fossil myself in the shaft, I relied upon the testimony I had. And now I may explain that the Honorable Bourne Russell, member of the Legislative Council of New South Wales, having opened pits near Stony Creek, in the mountain limestone beds (from which he sent me specimens of the whole series of the beds from top to bottom) below all the fossiliferous beds and coal seams, came upon the bed from which he sent me *a large slab*, on which the fossil was

marked, and of which I carried a small brittle portion to Melbourne, with an abundance of other fossils from different portions of the colony, for the sole purpose of exhibiting them, and I have no doubt that Mr. Russell will be able to prove whether the slab came from the bottom or the top of the shaft, if any one is anxious to inquire.

To sum up all, I may here state that, though it is very easy to make the "worst appear the better reason," I have no object in any controversy on this question but truth. Having, since my acquaintance with the whole of the facts, always found a difficulty in reconciling the idea of *two epochs* in the formation of the deposits including our coal-beds, in consequence of the apparent continuous succession of those deposits, and the occurrence of coal throughout, together with the absence of oolitic zoological, and the presence of palæozoic zoological forms, I have not seen fit to renounce the opinion which is shared by others as well as by myself, because at present we have no grounds to do so; but it is easy to gather from this paper, as well as from other evidences of my own, that I am quite ready to admit, when proved, that some of the beds are younger than my fourth division or Mr. McCoy's base of the carboniferous system, and may, with the example of India before us, be even younger than oolite; but, with the idea of one succession, I must renounce the idea of all above the base being oolitic.

If sufficient evidence be produced to prove my opinions to be erroneous, I will readily renounce them; only, I shall take the liberty of expressing my deep regret if anything I happen to say excite feelings and expressions which are unbecoming the philosophy of a civilized era.